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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 36

Application Number: 09/030,989
Filing Date: February 26, 1998
Appellant(s): NAZARIAN ET AL.

Ellen Marcie Emas
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 9/24/03.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that the claims do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

5524213	Dais et al	07/1996
5820414	Omori	10/1998
5444626	Schenk	08/1995
5730720	Sites et al.	03/1998

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. Claims 16-22,23-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dais (5524213), Omori (5820414), together or alternatively in combination with Schenk (5444626) and Sites (5730720).

Dais shows a system that can be used as a medical communication system that includes a bus and interface units 120 connected to the bus and also to peripheral units. See col. 1 line 11+. The interface units generate messages in the form of digital data packets. Dais does not expressly show the interface unit to be within a housing and have different shaped coupling means for coupling to the bus, and the peripheral.

Although Dais does not expressly show the communication system used in a medical perfusion system, it is the examiner's position that medical perfusion systems

commonly used communications systems. As an example, Sites shows a medical perfusion system that requires a communication system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used the above modified communication system to provide communication for a medical perfusion system, as Sites shows a communication system for a medical perfusion system and leaves it up to the artisan to choose an appropriate communication system.

In an analogous art, Omori shows an interface adapter pod 11 that connects a circuit board 1 to a bus 19a. The interface adapter includes processing elements 16 and 17 and includes connector means which have different shaped couplers as claimed, to provide connection and improvement of the IC card. Omori shows a controller, which provides power to the slave device through the adapter. See col. 7 lines 38+.

The examiner takes note that a perfusion device is a well-known medical instrument that would have fallen under the medical application taught by Dais, as disclosed by the appellant (page 1 lines 9-19 of current specification) a medical perfusion system includes sensors (such as flow and level sensors) which are monitoring elements and is therefore is a well known medical monitoring system.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized an interface unit in the shape of Omori in the Dais system in order to provide connection and improvement to the peripheral unit of Dais. With regard to the "adapted to" limitation, it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires

the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138. If such a limitation were given weight, it is submitted that Dais shows the modules 2-5 which communicate to the control unit 1 in addition to other modules. Additionally Schenk (5444626) also shows a communication adapter (pod), which communicates information to other modules in addition to a control unit.

Although Dais does not expressly show the communication system used in a medical perfusion system, it is the examiner's position that medical perfusion systems commonly used communications systems, see appellant's specification page 1 lines 9-27. Furthermore, Sites shows a medical perfusion system that requires a communication system. Sites shows that the controlled medical perfusion system includes some communication between a central station and a plurality of blood pumps. Sites specifically shows the use of control signals to control the speed of the blood pumps, which is considered a mode control signal (col. 11 lines 62+). Sites shows the pumps to be or the roller type. As evidenced by the appellant's discussion of centrifugal pumps on page 6 lines 10+, the use of centrifugal vs. roller pumps is considered a design choice and would have been obvious to one of ordinary skill in the art. Sites also shows turning on and off the blood pre-conditioner 310, thereby controlling the power to the perfusion device, see col. 11 line 61. Sites shows the communication of alarm data on col. 7 lines 36+ and the communication of the specific parameters claimed, see table 1. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used the above modified communication system to provide communication for a medical perfusion system, as Sites shows a communication

system for a medical perfusion system and leaves it up to the artisan to choose an appropriate communication system.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

It is noted that the examiner is aware of 35 USC 121 regarding the use of related (divisional) applications as basis for rejections, however in this instance the pending claims in question were not subject to the restriction requirement made in the parent.

2. Claims 23 and 30 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 5813972. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons. Appellants, in the course of expanding their first application to disclose enough more by way of details, alternatives, and additional uses to support the broad, dominating, "generic" claims

here, have disclosed no additional invention or discovery other than what has already been claimed in patent as explained below. To allow such claims would improperly provide timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982). An example side-by-side comparison of the claims is shown below.

Claim 23	US Patent 5813972
An adaptor pod for use in a medical perfusion system, wherein the medical perfusion system has a plurality of perfusion devices, including at least one blood pump, and a communication network that links each of the plurality of perfusion devices,	Claim 1 includes at least two blood pumps in a medical perfusion system. Claim 1 also includes at least one adapter pod. Claim 1 further includes limitations of a communication network that interconnects each of perfusion devices.
the adaptor pod comprising: a first connector for use in coupling the adaptor pod, through a data bus, to any one of a number of available connection points within the communication network;	Claim 1 describes the first adapter pod as including a network connector device, and claim 8 discusses that a bus connector (signals lines) are included in the adapter pod.
a second connector for use in coupling the adaptor pod to the blood pump via a data line;	Claim 8 additionally describes a second connector including a "second number of signal lines."
and means for controlling the transmission of a blood pump control signal from the adaptor pod to the blood pump over the data line.	Claim 6 includes a network controller for controlling transmission of messages over the network of perfusion devices (blood pumps) of claim 1.

3. Claims 23-38 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1,6-8 of U.S. Patent No.

5813972 in view of Sites (5730720). The claims in the patent do not expressly show or address the specific perfusion system limitations of claims 24-29 and 31-38 however as discussed above Sites does show the claimed elements. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used the above claimed medical perfusion system of patent number 5813972 to provide communication for specific medical perfusion elements, as Sites shows what type of perfusion data is beneficial in communication system for a medical perfusion system.

(11) Response to Argument

Regarding the arguments in section VIII.A., the appellant makes some general statements that the rejections are erroneous because the claimed subject matter and that the Examiner is not considering the remaining teachings of the references that lead away from the claimed invention. These statements are made without fact, merit or any substantial support that would provide the Examiner an opportunity to explain or defend the rejection. For example: what claimed subject matter, what elements of the reference teach away. In this section appellant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Regarding the arguments in section VIII.B; the appellant makes some general statements that the references do not show some elements, however again this section

does not explicitly address the rejection at hand and provides no support for the appellant's conclusions.

Regarding the arguments in section VIII.C; here that appellant attempts to address the rejection but fails to provide persuasive arguments for the following reasons.

The appellant argues that Dias *merely* discloses a message-structuring scheme. This is not true as evidenced by the fact that the appellant admits that Dias discloses a control apparatus that includes an engine control unit, a transmission control unit, an ABS control unit, a steering control unit and a climate control unit connected through CAN controller interfaces (see sentence that bridges pages 10 and 11 in the Brief of 9/24/03). Therefore, the appellant is incorrect in stating that Dias merely discloses a message-structuring scheme.

The appellant argues that Dias does not disclose an adapter pod for use in a medical perfusion system. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Dias is cited for teaching the use of an interface 8 in a medical monitoring system (note that the appellant has defined a medical perfusion system as a common system including monitoring elements) while Omori is cited for teaching the arrangement of an interface as an adapter pod.

The appellant argues that Dias does not disclose a controller for providing power to a perfusion device and generating messages to transmit to a main controller. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Omori is cited for teaching the interface to provide power to the slave device, while the interface controller 8 (Dias) generates messages that are transmitted to a main controller 1 in a medical system, see col. 9 lines 46+.

The appellant argues that Dias teaches away from the claimed invention since it the interface 8 communicates with other interfaces and not a main controller. This is incorrect since the interface 8 of the transmission control unit does send data to the control unit 1 see col. 9 lines 30+. Furthermore, the appellant's arguments regarding teaching away are misguided. It can only be argued that the reference teaches away if the reference explicitly states that such a process cannot operate. Hypothetically, if a reference did not specifically show a feature it is not normally considered that the reference "teaches away."

The appellant argues that Dais does not teach a common connector connected to an identical connector or a connector connected to a connector configured differently, in a medical perfusion system. With regard to the "adapted to" limitation, it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138. If such a limitation were given weight, it is submitted that Dais shows the modules 2-5 which communicate

to the control unit 1 in addition to other modules. Additionally Schenk (5444626) also shows a communication adapter (pod), which communicates information to other modules in addition to a control unit. Additionally, Omori teaches a network interface 11 (connector) that is adapted to be connected to a network connector with common configuration since element 13 mates with element 19. Omori also teaches the interface is adapted to be connected to a slave device 4 having a connector configuration different than the "common" connector (configuration).

The appellant argues that Dais does not teach a first connector coupled through a data bus to any one of a number of connection points within a perfusion network. The appellant's arguments are again incorrect. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. With reference to the network being specifically a perfusion network, Dais teaches a medical monitoring network that includes a data bus 7 that connects the interfaces 8 to any one of a number of connection points (other interfaces 8) along the data bus. Furthermore, as noted above the appellant's own specification states that a medical perfusion system is a common medical monitoring system.

The appellant argues that Dais does not teach a controller that selectively supplies power to a device interface as claimed in claim 20. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Omori is cited for teaching a controller, which provides power to the slave device through the adapter as claimed. See col. 7 lines 38+.

Furthermore, Sites teaches turning on and off the blood pre-conditioner 310, thereby controlling the power to the perfusion device, see col. 11 line 61.

The appellant argues that Dais does not teach a device connector having a first number of signal lines and a common connector having a different number of signal lines as claimed in claims 17,19,22. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Omori is cited for teaching a controller, which provides power to the slave device through the adapter as claimed. See figure 5 where the network side of the adapter 13 has four signal line connections and the slave side of the adapter 12A and 12B includes 12 signal line connections, which is different from four.

The appellant argues that Dais does not teach the control signal defines a desired pump speed for a blood pump as claimed in claim 24. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Dais is cited for teaching the sending of addressable control commands to the units 2,3,4,5. Dais also suggests the use of the network in a medical monitoring system. The appellant admits in the specification that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Additionally, Sites teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites teaches once the measured parameters are processed by the computer 111, control signals are sent by computer 111 to appropriate and known driver circuits 124 on interface circuit 120, which drive control signals back, for

example, to turn on-or-off blood pre-conditioner 310, **control the speed of blood pump 320**, control the heat gain-or-loss of heat exchanger 330, control the amount of oxygenation provided from blood post-conditioner 380, and/or control the heat gain-or-loss of water-conditioning subsystem 340. See Sites col. 11 lines 56-65.

The appellant argues that Dais does not show a control signal to change the mode of operation for a blood pump or blood parameter sensing device as in claims 25 and 38. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. As discussed above, Sites teaches control signals to control the speed of the blood pump. A slow speed is interpreted as a slow mode while a fast pump speed is considered a fast mode, therefore Sites does teach a control signal to change the mode of operation for a blood pump.

The appellant argues that Dais does not show a centrifugal pump or roller pump as in claims 26,27. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows the pumps to be or the roller type, see col. 28 line 45.

The appellant argues that Dais does not show a means for processing an alarm signal via a data line as in claim 28. Again, one cannot show nonobviousness by

attacking references individually where the rejections are based on combinations of references. Sites teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows processing of signals to generate an alarm, see col. 28 lines 60+.

The appellant argues that Dais does not show an encoding means for encoding an alarm message and a broadcasting means to broadcast the message as in claim 29. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows processing of signals to generate an alarm as set forth in claim 29, see col. 31 lines 10+.

The appellant argues that Dais does not show a reading means for reading a numerical value representing a blood parameter as in claim 31. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows reading a numerical value representing a blood parameter (temperature for example) see col. 31 lines 35 through col. 32 line 10.

The appellant argues that Dais does not show an encoding means for encoding a message that identifies the numeric value and broadcasting that message as in claim 32. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites teaches that a

medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows encoding a message that identifies the numeric value and broadcasting that message as in claim 32, see col. 2 lines 25+.

The appellant argues that Dais does not show a message that identifies a numeric value that represents blood flow, pressure, temperature occlusions or an embolus as in claims 33-37. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows reading a numerical value representing the claimed blood parameters, see col. 31 lines 35 through col. 32 line 40.

The appellant argues that Omori does not show an adapter pod for a medical perfusion system. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. In summary as set forth in the rejection repeated above, Omori is cited for teaching adapter pods as interface units in a Dais medical network which would include perfusion elements as suggested by Sites.

The appellant argues that Omori does not show a controller that generates messages for communication with a perfusion device and a main controller of a medical perfusion system. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.

Dais is cited for teaching controller 8 that generates messages for communication with a medical device (like element 2 of Dais) and a main controller (similar to element 1 of Dais). Sites is cited for teaching the application of a communication network for a medical perfusion system.

The appellant argues that Omori does not show a controller that controls electrical power to a perfusion device as in claims 16,18 and 21. Omori teaches providing power to the electronic circuits of the adapter which is suggestive of providing power to the slave perfusion device. In addition, Sites also shows turning on and off the blood pre-conditioner 310, thereby controlling the power to the perfusion device, see col. 11 line 61.

The appellant argues that Omori does not show a first connector coupled through a bus to a communication network that links each of a plurality of perfusion devices and a second connector coupled to a blood pump or blood parameter sensing device via a data line as in claims 23 and 30. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Dais and Sites are cited for teaching a network of medical perfusion devices each with an interface unit between the network and the specific perfusion device. Omori is cited for the teaching of an adapter pod that acts as an interface between a network and a slave device 4. The adapter pod of Omori includes a first connector coupled through a bus to a communication network that links each of a plurality of devices and a second connector coupled to a slave device via a data line as claimed.

The appellant argues that Omori does not show a receiving a signal over a data line to a blood pump or from a blood parameter sensing device as in claims 23 and 30. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Dais and Sites are cited for teaching a network of medical perfusion devices each with an interface unit between the network and the specific perfusion device. As discussed above, Sites teaches sending and sending and receiving these types of data.

The appellant argues that Omori does not teach a controller that selectively supplies power to a device interface as claimed in claim 20. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Omori teaches providing power to the electronic circuits of the adapter which is suggestive of providing power to the slave perfusion device. Furthermore, Sites teaches turning on and off the blood pre-conditioner 310, thereby controlling the power to the perfusion device, see col. 11 line 61.

The appellant argues that Omori does not teach a device connector having a first number of signal lines and a common connector having a different number of signal lines as claimed in claims 17,19,22. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Omori teaches providing power to the electronic circuits of the adapter which is suggestive of providing power to the slave perfusion device. Furthermore, Sites teaches turning on and off the blood pre-conditioner 310, thereby controlling the power to the perfusion device, see col. 11 line 61. See figure 5 where the network side of the

adapter 13 has four signal line connections and the slave side of the adapter 12A and 12B includes 12 signal line connections, which is different from four.

The appellant argues that Omori does not teach the control signal defines a desired pump speed for a blood pump as claimed in claim 24. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Dais is cited for teaching the sending of addressable control commands to the units 2,3,4,5. Dais also suggests the use of the network in a medical monitoring system. The appellant admits in the specification that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Additionally, Sites teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites teaches once the measured parameters are processed by the computer 111, control signals are sent by computer 111 to appropriate and known driver circuits 124 on interface circuit 120, which drive control signals back, for example, to turn on-or-off blood pre-conditioner 310, **control the speed of blood pump 320**, control the heat gain-or-loss of heat exchanger 330, control the amount of oxygenation provided from blood post-conditioner 380, and/or control the heat gain-or-loss of water-conditioning subsystem 340. See Sites col. 11 lines 56-65.

The appellant argues that Omori does not show a control signal to change the mode of operation for a blood pump or blood parameter sensing device as in claims 25 and 38. Again, one cannot show nonobviousness by attacking references individually

where the rejections are based on combinations of references. Sites teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. As discussed above, Sites teaches control signals to control the speed of the blood pump. A slow speed is interpreted as a slow mode while a fast pump speed is considered a fast mode, therefore Sites does teach a control signal to change the mode of operation for a blood pump.

The appellant argues that Omori does not show a centrifugal pump or roller pump as in claims 26,27. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows the pumps to be or the roller type, see col. 28 line 45.

The appellant argues that Omori does not show a means for processing an alarm signal via a data line as in claim 28. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows processing of signals to generate an alarm, see col. 28 lines 60+.

The appellant argues that Omori does not show an encoding means for encoding an alarm message and a broadcasting means to broadcast the message as in claim 29. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites teaches that a

medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows processing of signals to generate an alarm as set forth in claim 29, see col. 31 lines 10+.

The appellant argues that Omori does not show a reading means for reading a numerical value representing a blood parameter as in claim 31. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows reading a numerical value representing a blood parameter (temperature for example) see col. 31 lines 35 through col. 32 line 10.

The appellant argues that Omori does not show an encoding means for encoding a message that identifies the numeric value and broadcasting that message as in claim 32. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows encoding a message that identifies the numeric value and broadcasting that message as in claim 32, see col. 2 lines 25+.

The appellant argues that Omori does not show a message that identifies a numeric value that represents blood flow, pressure, temperature occlusions or an embolus as in claims 33-37. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.

Sites teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows reading a numerical value representing the claimed blood parameters, see col. 31 lines 35 through col. 32 line 40.

The appellant argues that Schenk does not teach or suggest an adapter pod for use in a medical perfusion system. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. In summary as set forth in the rejection repeated above, Omori is cited for teaching adapter pods as interface units in a Dais medical network that would include perfusion elements as suggested by Sites.

The appellant argues that Schenk does not teach a controller to control the electrical power to a perfusion device. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Omori teaches providing power to the electronic circuits of the adapter which is suggestive of providing power to the slave perfusion device. In addition, Sites also shows turning on and off the blood pre-conditioner 310, thereby controlling the power to the perfusion device, see col. 11 line 61.

The appellant argues that Schenk does not show a receiving a signal over a data line to a blood pump or from a blood parameter sensing device as in claims 23 and 30. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Dais and Sites are cited for teaching a network of medical perfusion devices each with an interface unit between

the network and the specific perfusion device. As discussed above, Sites teaches sending and sending and receiving these types of data.

The appellant argues that Schenk does not teach a device connector having a first number of signal lines and a common connector having a different number of signal lines as claimed in claims 17,19,22. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Omori teaches providing power to the electronic circuits of the adapter which is suggestive of providing power to the slave perfusion device. Furthermore, Sites teaches turning on and off the blood pre-conditioner 310, thereby controlling the power to the perfusion device, see col. 11 line 61. See figure 5 where the network side of the adapter 13 has four signal line connections and the slave side of the adapter 12A and 12B includes 12 signal line connections, which is different from four.

The appellant argues that Schenk does not teach the control signal defines a desired pump speed for a blood pump as claimed in claim 24. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Dais is cited for teaching the sending of addressable control commands to the units 2,3,4,5. Dais also suggests the use of the network in a medical monitoring system. The appellant admits in the specification that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Additionally, Sites teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites teaches once the measured parameters are processed

by the computer 111, control signals are sent by computer 111 to appropriate and known driver circuits 124 on interface circuit 120, which drive control signals back, for example, to turn on-or-off blood pre-conditioner 310, **control the speed of blood pump 320**, control the heat gain-or-loss of heat exchanger 330, control the amount of oxygenation provided from blood post-conditioner 380, and/or control the heat gain-or-loss of water-conditioning subsystem 340. See Sites col. 11 lines 56-65.

The appellant argues that Schenk does not show a control signal to change the mode of operation for a blood pump or blood parameter sensing device as in claims 25 and 38. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. As discussed above, Sites teaches control signals to control the speed of the blood pump. A slow speed is interpreted as a slow mode while a fast pump speed is considered a fast mode, therefore Sites does teach a control signal to change the mode of operation for a blood pump.

The appellant argues that Schenk does not show a centrifugal pump or roller pump as in claims 26,27. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows the pumps to be or the roller type, see col. 28 line 45.

The appellant argues that Schenk does not show a means for processing an alarm signal via a data line as in claim 28. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows processing of signals to generate an alarm, see col. 28 lines 60+.

The appellant argues that Schenk does not show an encoding means for encoding an alarm message and a broadcasting means to broadcast the message as in claim 29. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows processing of signals to generate an alarm as set forth in claim 29, see col. 31 lines 10+.

The appellant argues that Schenk does not show a reading means for reading a numerical value representing a blood parameter as in claim 31. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows reading a numerical value representing a blood parameter (temperature for example) see col. 31 lines 35 through col. 32 line 10.

The appellant argues that Schenk does not show an encoding means for encoding a message that identifies the numeric value and broadcasting that message

as in claim 32. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows encoding a message that identifies the numeric value and broadcasting that message as in claim 32, see col. 2 lines 25+.

The appellant argues that Schenk does not show a message that identifies a numeric value that represents blood flow, pressure, temperature occlusions or an embolus as in claims 33-37. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows reading a numerical value representing the claimed blood parameters see col. 31 lines 35 through col. 32 line 40.

The appellant argues that Sites does not teach or suggest an adapter pod for use in a medical perfusion system. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. In summary as set forth in the rejection repeated above, Omori is cited for teaching adapter pods as interface units in a Dais medical network that would include perfusion elements as suggested by Sites.

The appellant argues that Sites does not teach a common connector connected to an identical connector or a connector connected to a connector configured

differently, in a medical perfusion system. With regard to the "adapted to" limitation, it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138. If such a limitation were given weight, it is submitted that Dais shows the modules 2-5 which communicate to the control unit 1 in addition to other modules. Additionally Schenk (5444626) also shows a communication adapter (pod), which communicates information to other modules in addition to a control unit. Additionally, Omori teaches a network interface 11 (connector) that is adapted to be connected to a network connector with common configuration since element 13 mates with element 19. Omori also teaches the interface is adapted to be connected to a slave device 4 having a connector configuration different than the "common" connector (configuration).

The appellant argues that Sites does not show an adapter pod or a controller which generates messages for communication with a main controller of a medical perfusion system. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Omori is cited for teaching an adapter pod as an interface between a network and a slave device. Dais is cited for teaching controller 8 that generates messages for communication with a medical device (like element 2 of Dais) and a main controller (similar to element 1 of Dais). Sites is cited for teaching the application of a communication network for a medical perfusion system.

The appellant argues that Sites does not show an adapter pod that includes a first connector coupled through a bus to a communication network that links each of a plurality of perfusion devices and a second connector coupled to a blood pump or blood parameter sensing device via a data line as in claims 23 and 30. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Dais and Sites are cited for teaching a network of medical perfusion devices each with an interface unit between the network and the specific perfusion device. Omori is cited for the teaching of an adapter pod that acts as an interface between a network and a slave device 4. The adapter pod of Omori includes a first connector coupled through a bus to a communication network that links each of a plurality of devices and a second connector coupled to a slave device via a data line as claimed.

The appellant argues that Sites does not teach a controller that selectively supplies power to a device interface as claimed in claim 20. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Omori teaches providing power to the electronic circuits of the adapter which is suggestive of providing power to the slave perfusion device. Furthermore, Sites does teaches turning on and off the blood pre-conditioner 310, thereby selectively controlling the power to the perfusion device, see col. 11 line 61.

The appellant argues that Sites does not teach a device connector having a first number of signal lines and a common connector having a different number of signal lines as claimed in claims 17,19,22. Again, one cannot show nonobviousness by

attacking references individually where the rejections are based on combinations of references. Omori teaches providing power to the electronic circuits of the adapter which is suggestive of providing power to the slave perfusion device. Furthermore, Sites does teaches turning on and off the blood pre-conditioner 310, thereby controlling the power to the perfusion device, see col. 11 line 61. See figure 5 where the network side of the adapter 13 has four signal line connections and the slave side of the adapter 12A and 12B includes 12 signal line connections, which is different from four.

The appellant argues that Sites does not teach the control signal defines a desired pump speed for a blood pump as claimed in claim 24. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Dais is cited for teaching the sending of addressable control commands to the units 2,3,4,5. Dais also suggests the use of the network in a medical monitoring system. The appellant admits in the specification that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites does teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites teaches once the measured parameters are processed by the computer 111, control signals are sent by computer 111 to appropriate and known driver circuits 124 on interface circuit 120, which drive control signals back, for example, to turn on-or-off blood pre-conditioner 310, **control the speed of blood pump 320**, control the heat gain-or-loss of heat exchanger 330, control the amount of oxygenation provided from blood post-conditioner 380, and/or

control the heat gain-or-loss of water-conditioning subsystem 340. See Sites col. 11 lines 56-65.

The appellant argues that Sites does not show a control signal to change the mode of operation for a blood pump or blood parameter sensing device as in claims 25 and 38. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites does teaches that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. As discussed above, Sites teaches control signals to control the speed of the blood pump. A slow speed is interpreted as a slow mode while a fast pump speed is considered a fast mode, therefore Sites does teach a control signal to change the mode of operation for a blood pump.

The appellant argues that Sites does not show a centrifugal pump or roller pump as in claims 26,27. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites does teach that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows the pumps to be or the roller type, see col. 28 line 45.

The appellant argues that Sites does not show a means for processing an alarm signal via a data line as in claim 28. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites does teach that a medical perfusion system is a common medical

monitoring system and that a medical perfusion system includes blood pumps. Sites shows processing of signals to generate an alarm, see col. 28 lines 60+.

The appellant argues that Sites does not show an encoding means for encoding an alarm message and a broadcasting means to broadcast the message as in claim 29. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites does teach that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows processing of signals to generate an alarm as set forth in claim 29, see col. 31 lines 10+.

The appellant argues that Sites does not show a reading means for reading a numerical value representing a blood parameter as in claim 31. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites does teach that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows reading a numerical value representing a blood parameter (temperature for example) see col. 31 lines 35 through col. 32 line 10.

The appellant argues that Sites does not show an encoding means for encoding a message that identifies the numeric value and broadcasting that message as in claim 32. Again, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. Sites does teach that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows encoding a message that

identifies the numeric value and broadcasting that message as in claim 32, see col. 2 lines 25+.

The appellant argues that Sites does not show a message that identifies a numeric value that represents blood flow, pressure, temperature occlusions or an embolus as in claims 33-37. Sites does that a medical perfusion system is a common medical monitoring system and that a medical perfusion system includes blood pumps. Sites shows reading a numerical value representing the claimed blood parameters, see col. 31 lines 35 through col. 32 line 40.

Regarding the arguments in section VIII.D; here the appellant argues that the references cannot be combined. The appellant argues that Dais, Omori and Schenk have [anything] *sic* to do with medical perfusion systems or adapter pods for medical perfusion systems. This argument is interpreted as the appellant believes the references cannot be combined since they are not analogous to the claimed invention. As stated above and agreed with by the appellant, Dais shows a communication network medical monitoring system, this is analogous to a medical perfusion system as evidenced by the appellant's disclosure on page 1 and Sites which show that medical perfusion systems include monitoring elements and can be considered a common medical monitoring system. Omori shows an adapter pod interface for a network system, and is therefore analogous to Dais and related to the problem being solved by the appellant, namely communication over a network.

Regarding the arguments in section IX.A; the appellant makes some general statements that the double patenting rejection is improper, this section does not explicitly address the rejection at hand and provides no support for the appellant's conclusions.

Regarding the arguments in section IX.B; the appellant argues that in the parent application, a restriction requirement was issued and this application is a direct result of the restriction requirement. As stated above, the examiner is aware of 35 USC 121 regarding the use of related (divisional) applications as basis for rejections, however in this instance the pending claims in question were not subject to the restriction requirement made in the parent. The appellant has not shown any facts that support their conclusion, has not specifically discussed how the claims in this case are different from the '972 Patent. The side by side analysis of the claim offered by the examiner clearly outlines how the claims in this application are obvious in view of the claims in the '972 Patent. The appellant argues that they have submitted a Terminal Disclaimer. This is true, but the Terminal disclaimer was not directed to, nor did it mention the specific patent in question, namely 5813972.

Regarding the arguments in section X.A; the appellant makes some general statements that the double patenting rejection is improper, this section does not explicitly address the rejection at hand and provides no support for the appellant's conclusions.

Regarding the arguments in section X.B. the appellant argues that the claims in the '972 patent are directed to a perfusion system and not an adapter pod. The appellant has not shown any facts that support their conclusion, has not specifically discussed how the claims in this case are different from the '972 Patent. The claims of the pending claims include limitations to the adapter pod and to the medical perfusion system as now argued by the appellant. The issued claims '972 patent also include limitations to the adapter pod and to the medical perfusion system see below copy of claim 1.

'972 claim 1:

A medical perfusion system for use in connection with the medical treatment of a patient, comprising:

a first blood pump adapted to pump blood through a first conduit fluidly connected to the patient;

a second blood pump adapted to pump blood through a second conduit fluidly connected to the patient;

a first sensor for sensing a first condition relating to the pumping of blood through said first conduit, said first sensor generating a sensing signal relating to said first second condition;

a second sensor for sensing a condition relating to the pumping of blood through said second conduit, said second sensor generating a sensing signal relating to said second condition;

a data communications network for operatively interconnecting said blood pumps and said sensors, said data communications network having a plurality of network connectors, each of said **network connectors having an identical connector configuration;**

a first adapter pod having a common connector and a device connector, said common connector being adapted to be coupled to one of said network connectors and said device connector being adapted to be coupled to said first pump;

a second adapter pod having a common connector and a device connector, said common connector of said second adapter pod being adapted to be coupled to one of said network connectors and said device connector of said second adapter pod being adapted to be coupled to said second pump;

a third adapter pod having a common connector and a device connector, said common connector of said third adapter pod being adapted to be coupled to one of said network connectors and said device connector of said third adapter pod being adapted to be coupled to said first sensor;

a fourth adapter pod having a common connector and a device connector, said common connector of said fourth adapter pod being adapted to be coupled to one of said network connectors and said device connector of said fourth adapter pod being adapted to be coupled to said second sensor, **said device connector of said fourth adapter pod having a different structure than said device connector of said first adapter pod;**

means for transmitting messages in the form of digital data packets among said first and second blood pumps and said first and second sensors over said data communications network; and

a controller operatively coupled to said blood pumps and said sensors via said data communications network, said controller having an input device for accepting pump control commands relating to said first and second blood pumps from an operator.

As can be seen by the highlighted elements, the patented claims include limitations specific to the adapter pods.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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Primary Examiner
Art Unit 2635

BAZ
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